



THE ONTARIO TOBACCO RESEARCH UNIT
UNITÉ DE RECHERCHE SUR LE TABAC DE L'ONTARIO

Generating knowledge for public health

Evaluation of the Risk-Based Enforcement Pilot

A Risk Categorization Model for Youth Access to Tobacco
Interim Report

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September 2012
(Released as an OTRU Special Report: June 2013)

Suggested Citation: Dubray J, Kirst M, Yates E, Schwartz R. *Evaluation of the Risk-Based Enforcement Pilot: A Risk-Categorization Model for Youth Access to Tobacco Interim Report*. Toronto: Ontario Tobacco Research Unit, September 2012 (Released as an OTRU Special Report: June 2013).

ACKNOWLEDGEMENTS

We would like to thank the enforcement staff at the three participating public health units for assisting in the development of the risk assessment questionnaire, sharing their tobacco enforcement expertise and experiences, and their overall dedication to the year-long intervention.

TABLE OF CONTENTS

Acknowledgements.....	iii
Table of Contents	iv
List of Tables	v
Acronyms and Abbreviations	vi
Executive Summary.....	1
Summary of Preliminary Findings	2
Background	4
Youth Access Enforcement Prior to the Pilot Project.....	5
Overview of the Risk Categorization Model for Youth Access to Tobacco Pilot Project	5
Risk Assessment Questionnaire	6
Tobacco Vendor Risk Categorization	8
Intervention Design.....	9
Tobacco Inspection System	12
Evaluation Objectives.....	13
Methods	14
Interviews	14
Compliance Data Analysis	14
Findings	16
Intervention Implementation	16
Intervention Frequency Completion	16
Organization of Intervention Visits	16
Issues that Affected Intervention Visit Scheduling	17
Scheduling Tools	17
Regional Factors that Impacted the Intervention	17
Challenges to Implementing the Intervention.....	18
Impact of the Intervention on the Public Health Units.....	19
Enforcement Practices	19
Enforcement Costs	20
Tobacco Vendor Risk Assessment.....	20
Accuracy of Risk Categorization	20
Elective Risk Assessment Questions.....	21
Perceived Tobacco Vendor Misclassification.....	22
Re-assigning Tobacco Vendors to a New Risk Category.....	23

Tobacco Vendor Ownership Changes.....	24
Perceived Impact of Intervention	24
Moderate Risk and High Risk Tobacco Vendors	24
No Risk and Low Risk Tobacco Vendors	24
Enforcement Staff Reflections on the Intervention	25
Strengths	25
Weaknesses	26
Discussion.....	28
Appendix A: Interview Guides	30
Public Health Unit Tobacco Control Manager Intervention Interview Guide	31
Public Health Unit Tobacco Enforcement Officer Intervention Interview Guide	32
Public Health Unit Enforcement Staff Intervention Wrap-up Interview Guide.....	33
References	35

LIST OF TABLES

Table 1: Public Health Unit Enforcement Practices Prior to the Pilot Project.....	5
Table 2: Risk Assessment Questionnaire and Response Values	7
Table 3: Risk Assessment Questionnaire and Question Weighting, by Public Health Unit Site.....	8
Table 4: Risk Category Cut-off Values, by Public Health Unit Site	9
Table 5: Intervention Schedule, by Risk Category and Public Health Unit Site	10

ACRONYMS AND ABBREVIATIONS

PHU	Public Health Unit
OTRU	Ontario Tobacco Research Unit
RCM	Risk Categorization Model
TEO	Tobacco Enforcement Officer
TIS	Tobacco Inspection System

EXECUTIVE SUMMARY

Since 1994, it has been illegal to sell or supply a tobacco product to a person under the age of 19 in Ontario (youth access). Enforcement of the youth access restriction has been ongoing since that time. In 2009, the Ministry of Health Promotion and Sport initiated an exploration of new approaches to enforcing the *Smoke-Free Ontario Act* that would focus on risk of non-compliance. As a result of that exploration, a risk categorization model for youth access enforcement was piloted in three public health units over a 12-month period in 2011-2012.

Tobacco vendors were categorized according to their individual risk for selling tobacco products to underage youth. Tobacco vendors in each of the participating public health units were categorized into four risk categories (no risk, low risk, moderate risk, and high risk) based on scores derived from a series of seven core questions on a risk assessment questionnaire. Each of the participating public health units was given the opportunity to customize how risk for youth access non-compliance was defined for their region by adding up to three elective questions on the risk assessment questionnaire and assigning weights to the questions. Measures on the questionnaire included: complaint and enforcement history, geographic indicators, type of ownership and operation type. Once scored, each tobacco vendor received intervention visits (i.e., compliance check, enforcement check, etc.) according to the intervention schedule established for each risk category. Intervention schedules were customized by each public health unit to take into account the level of local enforcement resources. For example, one health unit followed a 0-0-2-4 intervention schedule where no risk and low risk tobacco vendors did not receive an intervention visit during the 12-month intervention, moderate risk tobacco vendors received two intervention visits and high risk tobacco vendors received four intervention visits.

Following the completion of the 12-month intervention, all three public health units returned to the standard youth access enforcement practice that consists of two annual compliance checks or enforcement checks to every tobacco vendor in their region.

The purpose of this evaluation is to explore how well the risk categorization model is working for youth access to tobacco enforcement.

This report focuses on the findings from interviews that were conducted throughout the intervention with both Tobacco Enforcement Managers and Tobacco Enforcement Officers. Interview topics included status of the intervention; implementation issues; effectiveness of risk

categorization model for youth access enforcement; and strengths, weaknesses and suggestions for improving the risk categorization model for youth access enforcement.

Analyses of compliance trends over a four year period (24 months pre-intervention, 12 months during the intervention, and 12 months post-intervention) along with recommendations will be released in September 2013.

Summary of Preliminary Findings

- Overall, all three public health units successfully completed the required number of intervention visits during the 12-month period with a few minor exceptions.

Accuracy of Tobacco Vendor Categorization:

- Enforcement staff felt that the risk assessment questionnaire closely identified the tobacco vendors whom they believed to be truly high risk for non-compliance with the youth access restriction.

Impact of Intervention on Public Health Unit Resources:

- Enforcement staff perceived that the impact of the increased intervention visits on public health unit enforcement costs was minimal.
- Enforcement staff reported that travel was an issue when visiting higher risk vendors more frequently; not only in the remote communities, but also the increased distance and time required to travel between higher risk tobacco vendors.

Impact of Intervention on Moderate Risk and High Risk Tobacco Vendors:

- Enforcement staff observed that the overall compliance rate appeared to be similar to previous years despite the increased number of intervention visits to moderate risk and high risk tobacco vendors.
- Enforcement staff indicated that none of the moderate risk or high risk tobacco vendors complained about being targeted.

Perceived Strengths:

- Enforcement staff stated that the key strength of the risk categorization model was that it identified and documented the tobacco vendors with a higher risk for selling tobacco to underage youth.

- Enforcement staff also believed that the increased frequency of intervention visits for the higher risk tobacco vendors provided an increased opportunity to monitor potential problems and target non-compliance.

Perceived Weakness:

- Enforcement staff identified that not visiting the no risk and low risk tobacco vendors was the primary weakness of the risk categorization model. Tobacco Enforcement Officers felt uneasy leaving these tobacco vendors untested for a year out of fear of the impact on their relationship with the tobacco vendor, and changes in ownership that may go undetected resulting in a greater potential for non-compliance.

BACKGROUND

Through the passage of the *Tobacco Control Act* in 1994, it became illegal to sell or supply a tobacco product to a person under the age of 19 in Ontario (youth access). Enforcement of the youth access restriction has been ongoing since that time. The youth access enforcement procedure – i.e., sending an underage youth into a tobacco vendor to attempt to purchase a tobacco product (also known as a “test shop”) – has essentially remained the same since 1994, with a couple of minor changes; all public health unit test shoppers now complete the sale if a clerk is willing to sell a tobacco product, and some public health units now allow their test shoppers to carry and show ID if requested by the clerk. The frequency in which each tobacco vendor has received a test shop increased in 2006 at the time of the *Smoke-Free Ontario Act* implementation. In 2009, the Ministry of Health Promotion and Sport asked the Ontario Tobacco Research Unit (OTRU) to research new approaches to enforcing the various sections of the *Smoke-Free Ontario Act*. Specifically, the research was to discover enforcement approaches that identified risk for non-compliance and considered risk for non-compliance in the management of enforcement activities.

In 2009-2010, OTRU undertook a rigorous review of the literature and relevant documents; interviews with Tobacco Enforcement Officers; a risk-assessment web-survey of public health unit enforcement managers, supervisors and staff; an analysis of risk-factors for non-compliance with the *Smoke-Free Ontario Act* using data from the Ministry of Health and Long-Term Care’s *Tobacco Inspection System* database; and, case studies to gather information about innovative enforcement approaches. This work informed two multi-site enforcement pilot projects in which two risk-based enforcement approaches were tested:

1. Problem-Solving/Community Engagement Approach to Enforcement
2. Risk Categorization Model for Youth Access to Tobacco

Public health units (PHU) were recruited from June through September 2010 to participate in either pilot project. Of the eight public health units that showed an interest in participating, five were selected based on consultations between OTRU and the Ministry of Health Promotion and Sport. Two urban public health units were selected for the Problem-Solving/Community Engagement Approach pilot project for enclosed workplaces and public places; and three public health units were chosen for the Risk Categorization Model for Youth Access to Tobacco pilot project (2 smaller public health units with outlying or remote areas, and 1 urban public health unit). All of the selected public health units were included in the development of the pilot

projects. As such, various aspects of the pilot projects were customized to best capture risk of non-compliance at the local level and to minimize the impact on local enforcement resources.

The following report focuses on the preliminary findings from the evaluation of the risk-categorization model for youth access to tobacco pilot project.

Youth Access Enforcement Prior to the Pilot Project

Although there is a standard protocol for youth access enforcement across the province, there are differences in how each of the three participating public health units conducted such enforcement prior to the pilot project. Table 1 summarizes these enforcement practices to provide context for the findings presented later in this report.

Table 1: Public Health Unit Enforcement Practices Prior to the Pilot Project

	PHU A	PHU B	PHU C
Number of annual youth access compliance checks or enforcement checks per tobacco vendor	1	2	1
Number of routine inspections to assess signage, display and promotion compliance, and to provide education	1-2	1	1
Test shopper provides photo ID when asked by clerk	Yes	Yes	No
Number of 'Who is 25?' compliance checks	2	1	N/A
Other	<ul style="list-style-type: none"> Quarterly tobacco vendor newsletters Written notice regarding non-compliance during enforcement and 'Who is 25?' checks Violations listed in local newspaper for enforcement and 'Who is 25?' checks 	Letter to all tobacco vendors to inform that a round of compliance checks/enforcement checks has been completed and includes the overall compliance rate.	

Overview of the Risk Categorization Model for Youth Access to Tobacco Pilot Project

A Risk Categorization Model is a management tool that enables consistent inspection planning and efficient resource allocation by identifying premises that are at higher risk for non-compliance. A risk assessment questionnaire is used to score premises by a list of risk factors.

The resulting total risk score is used to group premises into risk categories. This is the enforcement model that is currently applied to food inspections conducted in Ontario.¹

Risk Assessment Questionnaire

A questionnaire was developed for the purpose of categorizing tobacco vendors according to non-compliance with the youth access restriction in the *Smoke-Free Ontario Act*. Questions were drafted using information gathered through a literature review, a public health unit risk assessment web-survey, and a risk-factor analysis and feedback from the participating public health units. Consideration was also given to the information contained in the Ministry of Health and Long-Term Care's *Tobacco Inspection System* (TIS) when drafting questions to minimize the need for manual scoring of tobacco vendors.

Seven core questions were applied to tobacco vendor in all three participating public health units and included the following risk factors: enforcement history (four questions), tobacco vendor density, corporate versus independent ownership, and proximity to schools. Up to three questions could be added by each participating public health unit to meet their local risk assessment needs. The elective questions selected by the participating public health units included the following risk factors: history of complaints (PHU A, PHU C), history of failing to properly calculate age during a 'Who is 25?' compliance check (PHU A), seasonal operation (PHU B), and tobacco vendors barring entry to persons less than 19 years of age (PHU B).

Table 2 presents the risk assessment questionnaire and the response values. Once the questionnaire was finalized, each of the participating public health units manually completed the questionnaire for every tobacco vendor in their region using Excel. The scoring could not be automated in TIS since the TIS Risk Module was not fully developed at that time.

Weights were assigned to each question in the risk assessment questionnaire to calculate the risk score for each tobacco vendor. The magnitude of each question weight was determined individually by the participating public health units, yet the sum of the question weights for each public health unit equaled 100. This flexible approach to risk categorization allowed each public health unit to customize how risk for non-compliance with the youth access restriction was defined at the local level in order to account for contextual differences between public health units. Question weighting for each public health unit is summarized in Table 3.

Table 2: Risk Assessment Questionnaire and Response Values

Label	Question	Response Values
Core	Has this tobacco vendor ever sold tobacco to someone under the age of 19 years in the past 5 years (regardless of asking for proper ID)?	0 = No 1 = Yes
Core	Has this tobacco vendor ever neglected to ask someone who appears under the age of 25 years (i.e., test shopper or Who is 25? Shopper) for ID in the past 5 years?	0 = No 1 = Yes
Core	What action has been taken at this tobacco vendor as a result of non-compliance with the youth access restrictions in the past 5 years?	0 = None 1 = Warning(s) 2 = 1 charge 3 = 2 charges 4 = 3+ charges 5 = Automatic Prohibition
Core	What action has been taken at this tobacco vendor as a result of non-compliance with other SFOA-related restrictions in the past 5 years?	0 = None 1 = Warning(s) 2 = 1 charge 3 = 2 charges 4 = 3+ charges
Core	Is this tobacco vendor located in an area densely populated with other tobacco vendors?	0 = 0 vendors/block 1 = 1-2 vendors/block 2 = 3-4 vendors/block 3 = 5-6 vendors/block 4 = 7-8 vendors/block 5 = 9+ vendors/block
Core	Is this tobacco vendor independently owned (e.g. Mom & Pop shop)?	0 = No 1 = Yes
Core	Is this tobacco vendor located within a 1 km radius of a school?	0 = No 1 = Yes
Elective	Has any complaint been received?	0 = No 1 = Yes
Elective	Does this tobacco vendor prohibit entry to persons less than 19 years?	0 = No 1 = Yes
Elective	Has this tobacco vendor failed to correctly calculate the age of the purchaser during a 'Who is 25?' compliance check in the past 5 years?	0 = No 1 = Yes
Elective	Is this tobacco vendor operated seasonally?	0 = No 1 = Yes

Table 3: Risk Assessment Questionnaire and Question Weighting, by Public Health Unit Site

Label	Question	PHU A	PHU B	PHU C
Core	Has this tobacco vendor ever sold tobacco to someone under the age of 19 years in the past 5 years (regardless of asking for proper ID)?	25	30	25
Core	Has this tobacco vendor ever neglected to ask someone who appears under the age of 25 years (i.e., test shopper or Who is 25? Shopper) for ID in the past 5 years?	15	10	20
Core	What action has been taken at this tobacco vendor as a result of non-compliance with the youth access restrictions in the past 5 years?	15	15	15
Core	What action has been taken at this tobacco vendor as a result of non-compliance with other SFOA-related restrictions in the past 5 years?	15	11	5
Core	Is this tobacco vendor located in an area densely populated with other tobacco vendors?	5	8	5
Core	Is this tobacco vendor independently owned (e.g. Mom & Pop shop)?	5	13	5
Core	Is this tobacco vendor located within a 1 km radius of a school?	5	6	10
Elective	Has any complaint been received?	5	-	15
Elective	Does this tobacco vendor prohibit entry to persons less than 19 years?	-	4	-
Elective	Has this tobacco vendor failed to correctly calculate the age of the purchaser during a 'Who is 25?' compliance check in the past 5 years?	10	-	-
Elective	Is this tobacco vendor operated seasonally?	-	3	-
Sum of weights		100	100	100

Tobacco Vendor Risk Categorization

Risk scores for each tobacco vendor were calculated by summing the values obtained from multiplying each question response value by the assigned question weight. The range of possible risk scores for tobacco vendors was 0 to 100. Higher risk scores denoted greater risk of selling tobacco products to underage youth.

Initially, three risk categories were considered for the pilot project – low risk, moderate risk, high risk – based on the Risk Categorization Model for Food Retail/Food Service Establishments.² A fourth risk category – no risk – was added to reduce the resources allotted to tobacco vendors considered least likely to be non-compliant with the youth access restriction. Each risk category was defined by a range of risk scores, which was modeled from the Risk Categorization Model for Food Retail/Food Service Establishments.² The distribution of overall risk scores for each public health unit was also taken into account; therefore the range of risk scores that defined each risk category in the pilot varied by public health unit (see Table 4).

Public health units were given the opportunity to override and change a tobacco vendor’s risk category if they felt that the assigned risk categorization was inaccurate due to the receipt of a complaint, the issuance of a charge, or other anecdotal evidence of non-compliance. Any such changes were documented and the appropriate intervention schedule was followed (see the [Re-assigning Tobacco Vendors to a New Risk Category](#) section for frequency in which this occurred).

Table 4: Risk Category Cut-off Values, by Public Health Unit Site

Risk Category	PHU A		PHU B		PHU C	
	Risk-score cut-off	Number of tobacco vendors	Risk-score cut-off	Number of tobacco vendors	Risk-score cut-off	Number of tobacco vendors
No risk	0	9 (4.6%)	0	6 (3.1%)	0	22 (3.0%)
Low risk	1.0 – 25.0	88 (45.1%)	1.0 – 25.0	70 (36.7%)	1.0 – 30.0	392 (53.0%)
Moderate risk	25.1 – 55.0	75 (38.5%)	25.1 – 55.0	97 (50.8%)	30.1 – 60.0	164 (22.2%)
High risk	55.1 – 100	23 (11.8%)	55.1 – 100	18 (9.4%)	60.1 – 100	162 (21.9%)
Total		195 (100%)		191 (100%)		740 (100%)

Intervention Design

The aim of the intervention was to focus enforcement resources over a 12-month period on tobacco vendors with a higher risk of selling tobacco products to underage youth. To this end, an intervention schedule was developed according to risk, where high risk tobacco vendors received the most intervention visits and no risk and low risk tobacco vendors received fewer intervention visits. Intervention schedules differed by public health unit to ensure that the number of intervention visits was manageable given the locally available enforcement resources (see Table 5). PHU B followed a 0-1-2-5 intervention schedule: where no risk tobacco vendors received no intervention visits; low risk tobacco vendors received one intervention visit; moderate risk tobacco vendors received two intervention visits; and, high risk tobacco vendors received five intervention visits over the course of the year. PHUs A and C focused their intervention visits on the moderate risk and high risk tobacco vendors by selecting a 0-0-2-4 intervention schedule: where no risk and low risk tobacco vendors received no intervention visits; moderate risk tobacco vendors received two intervention visits; and, high risk tobacco vendors received four intervention visits over the course of the year.

Table 5: Intervention Schedule, by Risk Category and Public Health Unit Site

		No risk	Low risk	Moderate risk	High risk	Total
PHU A	Tobacco Vendors	9	88	75	23	195
	Intervention schedule (# of intervention visits)	0	0	2	4	
	Total intervention frequency	0	0	150	92	242
PHU B	Tobacco Vendors	6	70	97	18	191
	Intervention schedule (# of intervention visits)	0	1	2	5	
	Total intervention frequency	0	70	194	90	354
PHU C	Tobacco Vendors	22	392	164	162	740
	Intervention schedule (# of intervention visits)	0	0	2	4	
	Total intervention frequency	0	0	328	648	976

Scheduling of the intervention visits was left to the discretion of each public health unit with the condition that the intervention visits should be at least one month apart so that the visits were dispersed throughout the intervention period. Any tobacco vendor who opened for business during the 12-month intervention period was excluded from the intervention since neither baseline data, nor risk categorization would be available. However, any existing tobacco vendor who changed ownership during the intervention period continued to be visited as per the assigned intervention schedule since the enforcement history remains with the physical address in TIS.

Participating public health units continued to follow the Ministry of Health Promotion and Sport's *Protocol for Determination of Tobacco Vendor Compliance*³ during the intervention. For example, if a complaint was received for a no risk tobacco vendor that was not assigned any intervention visits, the public health unit conducted an inspection and documented it in TIS as per usual protocol (see the [No Risk and Low Risk Tobacco Vendors](#) section for frequency in which this occurred). Furthermore, in the case where tobacco vendors receiving intervention visits required a follow-up visit due to the issuance of a warning, charge, or the receipt of a complaint, the follow-up visit counted toward the intervention frequency assigned to that tobacco vendor. This stipulation ensured that the resources of each participating site were efficiently and thoughtfully used.

The type of inspection included as an intervention visit varied by public health unit to align with local enforcement resources. Intervention visits consisted of compliance checks or enforcement checksⁱ in PHUs B and C. PHU A, however, included other types of inspections in the intervention. High risk tobacco vendors in PHU A received one enforcement check, two ‘*Who is 25?*’ compliance checksⁱⁱ, and one policy and procedure visit where in-store youth access policy training and procedures were assessed by the Tobacco Enforcement Officer. Moderate risk tobacco vendors in PHU A received one enforcement check and one ‘*Who is 25?*’ compliance check.

All intervention visits were conducted by public health unit Tobacco Enforcement Officers who are responsible for enforcing the *Smoke-Free Ontario Act*, including: youth access compliance checks or enforcement checks, display and promotion inspections, workplace and enclosed public places inspections, restaurant and bar inspections, education visits, school inspections, and responding to complaints. During the intervention period, some tobacco vendors in the participating public health units received additional *Smoke-Free Ontario Act* inspections that were not included as intervention visits. PHUs B and C continued to conduct annual tobacco vendor education and display and promotion compliance checks to all tobacco vendors including the no risk and low risk tobacco vendors. Conversely, PHU A did not conduct any tobacco display and promotion compliance checks and provided some education only to high risk tobacco vendors as part of the policy and procedure visit during the intervention period. The no risk and low risk tobacco vendors in PHU A did not receive any *Smoke-Free Ontario Act* inspections during the course of the intervention. This was a departure from their previous youth access enforcement practices. Typically, PHU A Tobacco Enforcement Officers conduct 1–2 education visits throughout the year in addition to the two annually required compliance checks or enforcement checks.

ⁱ Both compliance and enforcement checks are conducted by sending an underage youth (test shopper) into a tobacco vendor to attempt to purchase a tobacco product (also known as a ‘test shop’). The enforcement action planned as the result of a successful tobacco purchase attempt determines the type of inspection. When a tobacco product is sold to a test shopper during a compliance check, a warning is issued. When a tobacco product is sold to a test shopper during an enforcement check, a charge is laid.

ⁱⁱ During a ‘*Who is 25?*’ compliance check, a 19-24 year-old test shopper is sent into a tobacco vendor to verify whether clerks are asking for identification from anyone who appears under the age of 25, as they are required to do under the *Smoke-Free Ontario Act*. Feedback is provided immediately to the clerk. Warning letters are issued after two consecutive failed checks. No charges are laid during these compliance checks.

PHU B was the first public health unit to start the intervention, beginning April 1, 2011 and ending March 31, 2012. PHUs A and C both began the intervention July 1, 2011 and finished June 30, 2012.

Tobacco Inspection System

All three participating public health units continued to enter the outcomes of each intervention visit into the Ministry of Health and Long-Term Care's *Tobacco Inspection System* (TIS). A risk module in TIS was launched during the course of the intervention. This module contained the risk assessment questionnaire and tobacco vendor risk scoring for each of the three participating public health units. Also, a risk report was added to the system to allow enforcement staff to view tobacco vendors by their assigned risk category and the date of the last inspection.

EVALUATION OBJECTIVES

The objective of the evaluation study was to explore how well the risk categorization model is working for youth access to tobacco enforcement. Specifically, to:

1. Assess whether increasing the frequency of intervention visits for high risk tobacco vendors increases compliance over time.
2. Assess whether decreasing the frequency of intervention visits for low risk and no risk tobacco vendors maintains levels of compliance over time.
3. Explore whether the risk categorization model correctly identifies tobacco vendors that were thought to be high risk for non-compliance.

This report will focus on the last evaluation objective, along with the development and execution of the risk categorization model for youth access to tobacco enforcement. The first two evaluation objectives will be addressed in a report scheduled for release in September 2013.

METHODS

Interviews

Bi-monthly telephone update meetings were conducted with the Tobacco Enforcement Managerⁱⁱⁱ from each of the participating public health units to collect feedback on the status of the intervention. Additionally, one-on-one interviews with each Tobacco Enforcement Officer were conducted at four-month intervals to assess the practical value of the risk categorization model for youth access enforcement and to discuss issues that may have arisen during the intervention. Upon completion of the intervention, longer wrap-up interviews were conducted with each Tobacco Enforcement Manager and Tobacco Enforcement Officer that explored topics such as: completion of the intervention, risk assessment questionnaire, changes in levels of compliance, intervention frequencies, resources, strengths, weaknesses and suggestions for improvement (see [Appendix A](#) for interview guides).

A total of 41 interviews were conducted; six for each of the three Tobacco Enforcement Managers and three for seven of the eight Tobacco Enforcement Officers who participated in this pilot project. One Tobacco Enforcement Officer completed two interviews but did not complete the final wrap-up interview because she had moved to a new position prior to the end of the intervention.

Interviews were primarily audio-recorded with consent from the participant. Hand-written notes were drafted during the bi-monthly telephone update meetings with Tobacco Enforcement Managers and when participants did not consent to be audio-recorded (three interviews). Audio-files were transcribed. Interview transcripts and notes were thematically analyzed using the qualitative software QSR N6.

Compliance Data Analysis

At the time of writing, TIS inspection data for the intervention period had only recently become available; however the data have not yet been analyzed. Over the course of the next year, TIS

ⁱⁱⁱ The designation of the individual responsible for managing the risk categorization model for youth access pilot project varied across participating health units. The generic term Tobacco Enforcement Manager will be used throughout the remainder of the report to represent this group of individuals.

inspection data from all 36 public health units in the province will be analyzed to assess changes in youth access compliance over three time periods: 24 months before the start of the intervention (2009 – 2011), 12 months during the intervention (2011 – 2012), and one year following the completion of the intervention (2012 – 2013). Compliance will be measured using the volume of tobacco sales to test shoppers, warnings, fines, charges, and complaints. Compliance among the three participating public health units will be compared to compliance from the remaining 33 public health units to ensure that changes in compliance were not due to a secular trend. All analyses will be included in the final report scheduled for release in September 2013.

FINDINGS

Intervention Implementation

Intervention Frequency Completion

Throughout the course of the intervention, enforcement staff consistently reported that they were on track to meet the intervention frequency. Scheduling intervention visits was suspended for a couple of months at two of the participating public health units due to local by-law development or hiring new test shoppers. No other major barriers were reported.

Overall, all three public health units successfully completed the required number of intervention visits during the 12-month period with a few minor exceptions. In PHU C, three high risk tobacco vendors received one less intervention visit than what was required, and a few high risk tobacco vendors received an additional intervention visit than what was required during the course of the intervention. These altered intervention frequencies were due to clerical tracking errors.

Organization of Intervention Visits

The majority of Tobacco Enforcement Officers structured their schedules so that they would conduct all the necessary intervention visits in sweeps.

“... like one visit to all the high and moderate and then take a break and then do the high and moderate again and then finish it with all the high.”

During the time between sweeps, Tobacco Enforcement Officers focused on other enforcement duties such as school inspections, workplace complaints, restaurant and bar inspections, vendor education and programming work at the public health unit.

Other Tobacco Enforcement Officers scattered their intervention visits throughout the year-long intervention period keeping in mind that the intervention visits were to be at least one month apart. These Tobacco Enforcement Officers worked on other enforcement duties in parallel with the intervention visits.

Issues that Affected Intervention Visit Scheduling

Scheduling the required number of intervention visits proved to be a challenge in some instances. For example, a few gas stations were closed for renovations at the beginning of the intervention forcing the required number of intervention visits to be conducted in a shorter time frame. Some Tobacco Enforcement Officers chose not to conduct intervention visits during the winter months (January and February), which posed an additional challenge to schedule all the required intervention visits within a 10-month time period. Also, focusing on higher risk tobacco vendors resulted in greater distance travelled between two tobacco vendors in the same outing, compared to the previous enforcement scheduling practice of conducting compliance checks or enforcement checks to all tobacco vendors in a selected area during the same outing.

“... so I'd plot them on Google Maps and see if there was a route that would be easy where it wouldn't allow me to zigzag and waste more traveling time so there was that additional prep time ... I'd probably enter about twenty of them into Google Maps and just to find you know an easy route with my test shopper...that took at least half an hour...”

Finally, one Tobacco Enforcement Officer left her position in the last month of the intervention and therefore her remaining intervention visits had to be re-assigned.

Scheduling Tools

The Risk Report available in TIS listed the tobacco vendor risk category and date of last inspection and was intended to help manage the scheduling of intervention visits. Very few enforcement staff were aware that there was a Risk Report available in TIS. Instead, the majority of enforcement staff used Excel to track the scheduling of intervention visits. In Excel, they created a spreadsheet that contained all the information that they needed to ensure that they were on track to meeting the required inspection frequency: the risk category, number of intervention visits required, the dates of completed intervention visits and outcomes of those intervention visits for each tobacco vendor.

Regional Factors that Impacted the Intervention

Travel was a regional factor that impacted the intervention for two of the public health units. Even in an urban public health unit, there was still substantial travel time between tobacco

vendors. This increased the amount of time the Tobacco Enforcement Officer was out with a test shopper.

“I try and make the most efficient route but... there is a lot more driving, especially when ... you’re going from postal code to postal code area hitting those high or moderate risks.”

“Yeah it requires more planning and then it does require more distance to cover ... right because one end will be ... like two premises can be test shopped there ... and then you would have to go to the south end because there’s three over there and then you would have to go to the north end because there’s one over there. So in terms of getting it completed ... it takes a lot more time to get it done.”

Remote communities also proved to have an impact on the intervention primarily due to the distance that was travelled to get there and the effort to secure a test shopper for an 8–12 hour shift. The risk of inclement weather in the wintertime also was a factor. PHU B chose to minimize the number of intervention visits to the remote communities during the winter months as a precaution.

Challenges to Implementing the Intervention

All Tobacco Enforcement Officers felt uneasy about leaving low risk and no risk tobacco vendors untested for a year. In part, some feared the impact that this intervention would have on the relationship that they have built with each tobacco vendor.

“...if one believes that our presence, just our presence has an impact we certainly have lost that.”

Some enforcement staff were concerned that the public health unit would not be aware of vendor ownership changes during the 12-month intervention period. They were also concerned that the new owner may not be informed of the requirements in the *Smoke-Free Ontario Act*. This is not too unlike enforcement procedures prior to the intervention, when up to a year could pass between routine inspections (i.e., education visits, display and promotion visits, etc.) where the Tobacco Enforcement Officer enters the store and speaks to the owner. However, this does highlight a need for a real-time system such as tobacco vendor licensing, where the public

health unit is notified of changes in ownership as they occur. Typically, an education visit would be conducted and a subsequent compliance check would occur when there is a change in ownership or a new tobacco vendor opens for business.

“Part of the reason for that concern is especially with the convenience stores that there’s a high turnover rate so it’s not always the same operator or owner/proprietor...and so we’re, we go out to do our yearly inspections but again between that time they could switch hands and ... you know maybe the knowledge isn’t there, they don’t really understand, maybe they weren’t reading the Smoke-Free Ontario Act’s binder that was supposed to be left by the previous vendor and so there is concern that they might be selling as well and we’re missing those vendors.”

Other enforcement staff stated that in fairness, every tobacco vendor should receive a compliance check or enforcement check since the risk of selling tobacco to an underage youth is always present.

“Yeah because I know that they still have a risk of offending so even though they might be a lower risk they’re still you know a risk of them offending or other circumstances coming into play that maybe weren’t there when the initial risk categorization was done.”

Impact of the Intervention on the Public Health Units

Enforcement Practices

Throughout the interviews, some of the enforcement staff commented that the intervention itself did not differ greatly from the enforcement practices that were in place prior to the intervention. Three reasons for this observation included:

- Some enforcement staff were informally categorizing and prioritizing tobacco vendors based on personal knowledge and experience prior to the intervention.
- Enforcement staff at PHU C are certified Public Health Inspectors and were familiar with a risk categorization model for inspecting food premises. However, they did not formally apply this model to youth access to tobacco enforcement prior to the intervention.

- The intervention did not change the protocol in which youth access compliance checks and enforcement checks were conducted. Rather, the intervention changed the frequency in which tobacco vendors received youth access compliance checks and enforcement checks in a year; with no risk and low risk tobacco vendors receiving fewer or no compliance checks and enforcement checks, and moderate risk and high risk tobacco vendors receiving more compliance checks and enforcement checks.

Enforcement Costs

Two of the three public health units did not experience any increase in enforcement costs during the intervention period despite some increased travel between tobacco vendors. PHU B, however, did see a modest increase in travel costs (approximately \$3,000 – \$5,000 spent on mileage, hotel costs, meals, test shopper wages) due to the higher number of intervention visits that were required in remote communities.

Tobacco Vendor Risk Assessment

Accuracy of Risk Categorization

Generally, the enforcement staff believed that the risk assessment questionnaire scored tobacco vendors fairly and accurately, and that the questions were appropriate.

“Like when I look up the places that we are very suspicious of, they were rated... either moderate or high so in that sense it categorized them properly.”

Initially, several enforcement staff were surprised that some of the tobacco vendors were categorized in a higher risk category than they had expected. However, they came to accept the risk categorization once the intervention began. One Tobacco Enforcement Officer began to question some of the risk categorization near the end of the intervention; specifically why one tobacco vendor was categorized as high risk when the vendor did not seem to have as many risk factors as other high risk tobacco vendors. This difference may be related to the weighting of the questions on the risk assessment questionnaire. A Tobacco Enforcement Manager also expressed concern that magnitude of the assigned question weights should have been more evidence informed. Otherwise, enforcement staff generally appreciated the fact that they were able to customize the question weighting so that it best reflected the level of compliance in their region.

“I think that was fair. I mean classifying it ourselves we know our community. We know how our program runs... so I mean compliance in one Health Unit area is different than compliance in another Health Unit area. We’re talking apples and oranges in some cases so assigning it ourselves I think is of value.”

Others were concerned about how the risk categorization would apply if the intervention were to continue beyond the 12-month intervention period given that tobacco vendors in the no risk and low risk categories would not have any enforcement data for over a year.

“I think at the time it was done it [categorized tobacco vendors correctly]. We’re not sure if you were to re-do the risk assessment...the ones that we have not looked at for the past year we don’t know where to put them anymore... so by taking them out of the mix we don’t know what has happened really at those locations.”

Elective Risk Assessment Questions

Four elective questions were added to the risk assessment questionnaire by the three participating public health units: history of complaints (PHUs A and C), history of failing to properly calculate age during a ‘Who is 25?’ compliance check (PHU A), seasonal operation (PHU B), and tobacco vendors barring entry to persons less than 19 years of age (PHU B).

History of Complaints

Enforcement staff deemed this to be an important risk factor for non-compliance since it acts like a red flag that something is amiss with a tobacco vendor. However, the number of complaints a public health unit received varied from a few to many. Enforcement staff speculated that the volume of complaints would be higher if the public were more educated in their ability to phone the public health unit with a complaint.

“I think there’s probably a lot of people that know of stores that sell and don’t know who to call to make a complaint. But the few that do put the effort in to call us, I think those places definitely are higher risk. But I guess there’s a lot of places that should have complaints made about them and people just, they’re too busy to even bother making a call. But I like that question...it’s important.”

History of Failing to Properly Calculate Age during a ‘Who is 25?’ Compliance Check

This question was believed to be very important in identifying the risk of selling tobacco to an underage youth. Enforcement staff felt that the majority of sales that occur are the result of a clerk not reading the driver’s license properly or miscalculating the age of the test shopper.

Seasonal Operation

Normally, a seasonal tobacco vendor in PHU B would receive one compliance check a year. If a sale occurred during that compliance check, the follow up enforcement check would not be conducted until the following year due to the remote location of some of the seasonal tobacco vendors. The purpose of the question was primarily to identify these tobacco vendors, but also to test if a sale would occur during a second intervention visit in one year.

Age-restricted Tobacco Vendors

Initially, it was thought that this group of tobacco vendors had the potential to be higher risk for selling tobacco to underage youth. The purpose of this question was to identify this group of tobacco vendors. However, test shopping is not usually conducted with these types of tobacco vendors since the test shopper would be under the age of admittance. No intervention visits were conducted in any age-restricted tobacco vendor establishments. Therefore, it was felt that this question perhaps should be removed from the risk assessment questionnaire.

Perceived Tobacco Vendor Misclassification

The majority of the tobacco vendors in the three participating public health units were reportedly properly categorized into risk categories; however, it was perceived that some vendors were misclassified. Estimates of misclassified tobacco vendors ranged from 12/191 (6%) in PHU B to 20/195 (10%) in PHU A, and up to 40/740 (5%) in PHU C. Personal experience and knowledge about the tobacco vendor were given as reasons for the belief that the tobacco vendor was misclassified.

“[TEO] had a few that she was concerned that were misclassified...sometimes she would go into a store and she’d say you know there’s something shady there ... when students enter the store, the owner is kind of like waving them back out and she thought it was because she was there and he was basically telling them this is not the time to get your smokes here so then you know she was concerned and she wanted to be test shopping them more...there was only maybe a few that we thought might have been misclassified but not that many.”

The true risk categorization for the tobacco vendors that were thought to be misclassified was either higher or lower. In the case of tobacco vendors who should have been categorized as higher risk, it was suggested that the misclassification was due to the six month gap in time between the tobacco vendor scoring and the start of the intervention. During that time, non-compliance was observed at some of the tobacco vendors rated as lower risk.

“I had, you know, some places that I thought shouldn’t really be on the list but others that maybe could have been on the list that weren’t on the list at all... but I believe that it did catch every place that I really do have a problem with but maybe not a hundred percent because some things maybe changed or we didn’t realize things when we were doing [the risk scoring].”

In PHU B, some remote communities had tobacco vendors who were unfairly rated as high risk as a result of the proximity to a school and tobacco vendor density.

“... the smaller the community the greater chance that the...vendor risk rating would be higher and it’s because of the questions that have to do with distance. Distance around a school or distance around other tobacco vendor areas. Many smaller communities there’s really just a downtown core or a center of the town so everything is within proximity of walking to the school, to the four corner stores...but because of those responses...it would put some of the vendors into either a medium or even a high risk rating because of those specific questions.”

Re-assigning Tobacco Vendors to a New Risk Category

Public health units were given the opportunity to re-categorize tobacco vendors into a new risk category if they strongly believed that vendors had been misclassified at the start of the intervention. Only a handful of tobacco vendors were re-categorized during the intervention, either based on previous knowledge and experience with the tobacco vendor, or as a result of the outcome of the first intervention visit. In most cases the risk category was upgraded to moderate risk or high risk, and a few were downgraded to low risk. The majority of enforcement staff decided to keep the risk categories that were assigned at the beginning of the intervention.

“Well when I changed any of them it was just basically my personal knowledge and you know just a feeling that I had about how closely, how often I should visit these people and that’s just what I went by when I assigned my category as opposed to what was assigned.”

Tobacco Vendor Ownership Changes

In the event of a change in ownership, all public health units kept the risk categorization assigned to the tobacco vendor even if the tobacco vendor was categorized as high risk. One example of a change in ownership occurred in PHU B. In one remote community there were two tobacco vendors that were categorized as high risk. During the course of the intervention, one tobacco vendor had closed for business and the other had changed ownership. The public health unit chose to keep the tobacco vendor categorized as high risk and continued with the appropriate high risk intervention schedule despite the expense to visit this one tobacco vendor.

Perceived Impact of Intervention

Moderate Risk and High Risk Tobacco Vendors

All enforcement staff perceived that there was no change in the number of tobacco sales to test shoppers during the increased number of intervention visits to moderate risk and high risk tobacco vendors. Analysis using TIS data will be conducted in the coming year to confirm whether this perception is true.

“We didn’t identify a change in trends...so percentage wise for compliance, previous years’ [was] very similar.”

None of the moderate risk or high risk tobacco vendors complained about being targeted. This is likely due to the fact that the tobacco vendors were unaware of the increased number of intervention visits since the Tobacco Enforcement Officers do not go into the store if the test shop does not result in a sale. In the case of PHU A, where they included other types of inspections in the intervention, they also did not receive any complaints because they normally go into the tobacco vendors numerous times throughout the year.

No Risk and Low Risk Tobacco Vendors

A very small number of no risk or low risk tobacco vendors in PHU C received a compliance check or enforcement check during the intervention period. These compliance checks or enforcement checks were conducted due to complaints or a suspicion of non-compliance based on observations taken during a routine education visit or a display and promotion compliance check.

“...and it was only during the inspection that it was you know a couple of kids that had come in and one looked shocked that I was there...it was suspicious to me at the time just the mannerisms with everything... in combination with when a young male came in saw I was there, went back to the car and got someone else older to come back... I was very suspicious. I couldn't leave that one.”

In PHU B, all tobacco vendors in the remote communities received a compliance check or enforcement check during the March Break (2 weeks before the end of the intervention). Tobacco Enforcement Officers were conducting the 5th intervention visit to the high risk tobacco vendors at that time. In an effort to efficiently use enforcement resources, the first of two annually required compliance checks and enforcement checks for the 2012 calendar year were conducted with the remote communities' no risk, low risk and moderate risk tobacco vendors as well. In this instance, the no risk tobacco vendors in the remote communities did not have a year-long break from compliance checks or enforcement checks, as was originally intended.

Enforcement Staff Reflections on the Intervention

Strengths

The most commonly cited strength of the risk categorization model was that it identified those tobacco vendors at a higher risk for selling tobacco to an underage youth. Many felt that the objectivity of the risk categorization also refuted any discrimination allegations from tobacco vendors since every tobacco vendor was scored using the same questions.

Some enforcement staff also believed that the increased frequency of intervention visits for the higher risk tobacco vendors was an asset, allowing enforcement staff to keep an eye on potential problems and target any non-compliance. The increased frequency of visiting tobacco vendors also provided the enforcement staff with the opportunity to assess if the tobacco vendor truly was high risk. The focus on high risk vendors was also viewed as a better way to deploy their resources.

“Again I will give the analogy to... the population health thing where you're dealing with a priority population... you would have the greatest impact and of course that spreads to the lower risk premises and I think it's public perception as well... I think you can also use that as a leveraging tool with the vendors saying look if your compliance is good, you won't see me...”

“...it helps to target any non-compliance issues we would have ... just the frequency of going out I think it keeps it, if they do know it’s our test shopper it keeps them on their toes. If they don’t then it just, again it helps us keep our eyes and ears open to what’s going on in that neighbourhood.”

Many of the Tobacco Enforcement Officers had previously applied their own informal method for determining the level of risk for each tobacco vendor in their area. However, they rarely documented this informal risk categorization. The risk categorization model applied through the pilot was viewed as valuable because it documented the level of risk and enabled information sharing among enforcement staff if ever they were to rotate areas or a new Tobacco Enforcement Officer took over enforcing a group of tobacco vendors.

“I think I would like to keep with the categorization...so that way it’ll flag say if, like we rotate areas every so often and when we have something that’s already been categorized it’ll have an easy flag or an easy system to flagging these premises for new inspectors or new officers that are taking on the area... as opposed to having...the premise highlighted on my list right.”

Another perceived strength of the risk categorization pilot project was that the enforcement staff participated in the design of the risk assessment questionnaire. This allowed them to use their knowledge and experience in shaping the questions that ultimately categorized tobacco vendors’ level of risk for non-compliance.

Weaknesses

All of the enforcement staff felt that the greatest weakness of the risk categorization model was the lack of intervention visits to the no risk or low risk tobacco vendors for an entire year. The main reason for this belief was that lack of enforcement equates to a lack of knowledge about the current situation in those tobacco vendors (e.g., change in ownership, lack of training, new clerk, etc.).

“I mean changing the owners it could be a big thing right and then someone just fresh coming into the store that could you know change the risk of the place.”

Also, enforcement staff acknowledged that selling tobacco to a test shopper is mostly the result of an honest mistake that could happen in any tobacco vendor regardless of the risk category. Therefore, some suggested that the no risk and low risk tobacco vendors should also receive at least one intervention visit a year.

“It’s just that there’s so many variables involved that at any one time a no risk or a low risk premise could very easily at any time create an... or you know be subject to an honest mistake where they miscalculate the date of birth... I think the low or no risk are just as much at risk of making an error that the high and medium are because I don’t think that in most cases people are...consciously selling tobacco or making a conscious decision to sell tobacco to somebody who’s under 19 years of age.”

Some participants also noted that if the no risk and low risk tobacco vendors continue to be exempt from any compliance checks or enforcement checks beyond the 12-month intervention period, no new inspection data would be collected (unless a complaint was received) and these tobacco vendors would never change their risk categories. Therefore, any non-compliance would go undetected. These tobacco vendors would continue to be categorized based on their initial information, yet the moderate risk and high risk tobacco vendors would continually have new enforcement data collected.

“... yeah like what would change if we were to do this again next year and we used the same criteria for assigning risk. I would have absolutely no idea how to assign risk to over half of my vendors because I haven’t seen them for a year.”

This issue would be resolved if the no risk and low risk tobacco vendors received a compliance check or enforcement check every year or at least every other year. This also highlights the need for a protocol that outlines the frequency with which all tobacco vendors are re-assessed for their risk of non-compliance with the youth access restriction.

DISCUSSION

A risk categorization model was applied to youth access to tobacco enforcement in three Ontario public health units over the course of a 12-month period. Generally, all enforcement staff, except one, believed that this was a promising approach to youth access enforcement. All three public health units were able to complete the required number of intervention visits during the time frame without any major issues. The risk assessment questionnaire was perceived to have identified high risk tobacco vendors fairly and accurately. Participants felt the intervention schedule was reasonable with the exception of the lack of intervention visits to the no risk and low risk tobacco vendors during the 12-month intervention period. These findings were based on information gathered through interviews with the enforcement staff from all three participating public health units.

A number of key messages have emerged from the interviews, including:

1. Consider modifying the intervention schedule to include at least one intervention visit to the no risk and low risk tobacco vendors every year or at least every other year to monitor compliance. Also, consider lowering the number of intervention visits for the high risk tobacco vendors to three since there is the potential for additional enforcement checks if non-compliance is observed.
2. Consider modifying the risk assessment questionnaire to capture additional information that may impact the risk of non-compliance, such as geographic zoning, neighbourhood SES, and in-store training provided to clerks. Also, consider limiting the proximity to school question to secondary schools since elementary school students cannot leave school property.
3. Consider a protocol to determine the frequency with which tobacco vendors are re-assessed for risk of non-compliance with the youth access restriction. This protocol might include clear instructions on how tobacco vendors should be categorized for risk in the event of a new business opening or a change in ownership (e.g., new business could start as a moderate risk tobacco vendor to generate a baseline enforcement history).

4. Changes in tobacco vendor ownership need to be flagged more systematically and in real time. This could be achieved through tobacco vendor licensing.
5. Explore the use of a consistent tool for managing tobacco vendor intervention visits across all public health units. Consider modifying the Risk Report in TIS to display tobacco vendors by the assigned risk category along with the number of required intervention visits, the dates of completed intervention visits, the number of outstanding intervention visits, and any warnings or charges that have been issued to that tobacco vendor.
6. Consider adding a notification system to TIS to alert management when a tobacco vendor is moved to a higher risk category due to observed non-compliance.

These findings provide important contextual information on how the intervention has worked in the field and feasibility of the risk categorization process and intervention schedule. However, further analyses are required in order to measure the full impact of the pilot project on compliance rates. These analyses will be available in another year, when compliance estimates can be compared over three periods of time – 24-months pre-intervention, 12 months during the intervention, and 12 months post-intervention. A final report that will include the compliance analysis over time and overall recommendations for this new approach to enforcing youth access to tobacco in Ontario will be released in September 2013.

APPENDIX A: INTERVIEW GUIDES

Public Health Unit Tobacco Control Manager Intervention Interview Guide

1. Describe your current involvement with this intervention.
(Probe: How much time do you spend on this project?)
2. Please describe the current status of the intervention at [public health unit name].
3. What was your initial vision for your involvement in this intervention? Has that vision changed at this point in the intervention?
4. Have you felt there has been a need to re-categorize any tobacco vendors into another risk category?
5. How do you feel the intervention is going so far? What do you think is working well? What differences are you noticing in enforcement procedures?
6. How has this intervention affected your enforcement resources? (Probe: driving time, mileage, hiring test shoppers)
7. Have you encountered any challenges or issues while executing the intervention? If yes, please describe the challenges or issues.
8. Do you have any concerns about the intervention? If yes, please describe your concerns.
9. Do you have any suggestions for improving the intervention? If yes, please describe.
10. Do you have any general questions about the intervention?

Public Health Unit Tobacco Enforcement Officer Intervention Interview Guide

1. [First interview only] What is your position at [public health unit name]? Can you briefly describe your role and responsibilities?
2. What do you think the goals of the risk categorization approach are? Do you think we are on track to meeting those goals?
3. Can you describe the progress of the intervention at your site? What stage is your PHU at with implementation of the intervention schedule?
4. Have you felt there has been a need to re-categorize any tobacco vendors into another risk category?
5. How do you feel the intervention is going so far? What do you think is working well?
6. What resources have been helpful in implementing the intervention schedule?
7. Have you encountered any barriers thus far in implementing the intervention schedule?

Probes: accessing information on risk categorization; reaching vendors several times; lack of inspection of low risk vendors; recording details in the Ministry's Tobacco Inspection System?
8. Are there regional factors that may help or hinder fulfilling the intervention schedule?
9. What do you think are the strengths of the risk categorization approach?
10. What do you think are the weaknesses of the risk categorization approach?
11. Can you describe any changes that you feel this approach would benefit from?
12. Do you have any overall feedback regarding this approach to vendor compliance for youth access to tobacco?

Public Health Unit Enforcement Staff Intervention Wrap-up Interview Guide

1. How did your health unit manage with the intervention frequency? Were you able to complete all the intervention visits during the 12 month intervention period? If not, what were the barriers that prevented you from completing all the intervention visits?
2. In your opinion, how well did the risk assessment questionnaire categorize tobacco vendors according to risk for selling tobacco products to minors?
 - a. Were the health unit-specific custom questions helpful in identifying risk for non-compliance?
3. How many tobacco vendors, do you believe, were misclassified into the wrong risk category at the start of this intervention? What category should they have been assigned?
4. Are there any changes that you would make to the risk assessment questionnaire? If yes, please describe. (e.g., add, modify or delete any questions)
5. How many tobacco vendors were assigned a new risk category during the intervention (either due to a tobacco sale or due to your overall impression of risk for a particular tobacco vendor)? Were there any issues due to change of ownership?
6. Among the moderate and high risk tobacco vendors, did you notice any change in compliance over the course of the intervention due to the increased number of intervention visits? If yes, please describe.
7. Did any moderate risk or high risk tobacco vendor comment or complain about being targeted with frequent intervention visits? If yes, please describe.
8. Did any no risk or low risk tobacco vendors receive an inspection during the intervention phase for reasons not related to the youth access to tobacco restriction? If yes, please describe.

9. Do you feel that the intervention frequency for each risk category was appropriate? If not, how would you change it?
10. [TEOs only] How did you organize the intervention visits throughout the course of the 12 month pilot project? For example, did you conduct one visit to all moderate and high risk, then break, and then conduct the second visit to all moderate and high, etc. Or did you scatter the inspections over the 12 month period?
 - a. Once you completed the low/moderate risk intervention visits and only focused on the high risk, did you have free time to focus on other duties? If yes, please describe.
11. How has the risk-based enforcement pilot project affected scheduling of your youth access compliance checks now that the pilot project is finished?
 - a. Will you keep reference to the risk categories assigned to each vendor?
 - b. Will you run out and conduct compliance checks to all of the no and low risk vendors before returning to the moderate and high risk vendors?
12. Was the Ministry's Tobacco Inspection System Risk Module helpful in managing and tracking intervention visits throughout the course of the intervention? Please describe.
13. Are there any changes that you would recommend to the Ministry's Tobacco Inspection System Risk Module that would facilitate implementing a risk categorization approach across the province? If yes, please describe.
14. How did the risk categorization model intervention impact your health unit's Smoke-Free Ontario Act enforcement resources? Please describe.
15. In your opinion, what were the strengths of the risk categorization model?
16. In your opinion, what were the weaknesses of the risk categorization model?
17. What are your suggestions for improving the risk categorization model to youth access enforcement?

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